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ABSTRACT

This study used data from a 4-year longitudinal study of students at the University of Missouri, Columbia, to explore differences between males and females in their decisions to seek bachelor's degrees. The study focused particularly on three mediating variables: (1) performance levels, (2) expectations, and (3) attainment values. Data were obtained from 495 students who originally enrolled in 1985, who remained for 1 year at least, and completed an early fall 1985 and spring 1986 questionnaire. Students' university records provided additional information. Students were re-contacted in 1989 and 257 (out of 424 found) completed the questionnaires. Of these, 177 were women. The results of the study provided no evidence that women give self-defeating explanations for their decisions to seek bachelor's degrees. The data suggested that women were more likely than men to take personal credit for their long-term, real world accomplishments. Women in the study had higher performance levels than men though these failed to explain why women made stronger internal attributions and weaker attributions to academic drift than men did. Women also prized the bachelor's degree as much as men did and were just as career oriented as their male counterparts. (Contains 31 references.) (JB)

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GENDERED ACCOUNTS:

UNDERGRADUATES EXPLAIN WHY THEY SEEK THEIR BACHELOR'S DEGREE[1]

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Paper accepted for presentation at the 19th Annual Meeting of the Association for the Study of Higher Education in Tucson, Arizona, November 13, 1994.

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This paper was presented at the annual meeting of the Association for the Study of Higher Education held at the Doubletree Hotel, Tucson, Arizona, November 10-13, 1994. This paper was reviewed by ASHE and was judged to be of high quality and of interest to others concerned with the research of higher education It has therefore been selected to be included in the ERIC collection of ASHE conference papers.

Abstract

Data from a four-year longitudinal study of undergraduates were used to determine whether males and females give different explanations for their decisions to seek bachelor's degrees and whether these differences could be explained by three mediating variables: performance levels, expectations, and attainment values. Females were found to give more importance to internal reasons than males did, but males gave higher ratings to items measuring academic drift, including luck. Females had higher academic performance levels than males, but no gender differences were found for expectations and attainment values, and performance levels did not explain gender differences in reasons for seeking the degree. An historic shift in gender ideology is proposed as an explanation for the findings.

The many concerns that have been expressed about a gender gap in the achievements of males and females give the impression that females can best be regarded as an underachieving, disadvantaged, second sex. National data (National Center for Education Statistics, 1993) concerned with performance in colleges and universities of males and females offer some challenges to this impression. Unlike many other countries, the United States now has higher participation ratios for women than for men in higher education, and American women are more likely than American males to complete bachelor's degrees.

What happens to these women after they complete their undergraduate degrees? National data indicate that the subsequent educational and occupational achievements of women fall behind those of men. Although the gender gap in graduate and professional degrees is narrowing, men continue to earn more of the Ph.D. and high-level professional degrees than women (Kaufman, 1989). In addition, women hold jobs that are, on average, inferior in many respects to those held by men. Among full-time, year-round workers, women earn less than men, and this gender difference in earnings is found even between men and women who have the same amount of education and job experience (National Committee on Pay Equity, 1992). On average, women also have less job autonomy and fewer promotional opportunities than their male counterparts. They continue to be concentrated in clerical jobs and are underrepresented in top-level managerial and professional positions (Kaufman, 1989).

Undoubtedly, there are many reasons why earning more bachelor's degrees than men fails to translate into higher subsequent achievements for women. Drawing on attribution theory, this paper uses data from a four-year longitudinal study of American undergraduates to investigate one of these possible reasons, namely, gender differences in the explanations undergraduates give

for seeking their bachelor's degrees. Most attribution researchers would probably agree with Weiner (1986, p. 190) that "attributions are without doubt linked to achievement performance," and most would argue that explanations for successful task performance based on internal reasons, such as ability and effort, are more likely to facilitate subsequent achievements than are explanations for successes based on external reasons, such as social influence or luck. If it were true, therefore, that compared to women, men give more emphasis to internal reasons and less emphasis to external reasons when explaining why they are attaining their bachelor's degree, attribution theory would predict that the subsequent achievements of men should be higher than those of women, a prediction that is supported by existing data. On the other hand, attribution theory would not predict existing outcomes if it were found that women gave more stress than men to internal reasons for attaining their bachelor's degrees and gave less stress than men to external reasons for this achievement. Such findings would suggest that gender differences in post-baccalaureate achievements are due to reasons other than the ways in which men and women account for their baccalaureate degrees.

How likely is it that men and women give different accounts for their degrees that would explain their different levels of post-graduate achievement? Although the literature does not contain studies that would answer this question directly, a substantial number of studies have appeared examining the effects of gender on explanations for one's own behaviors, other than degree-completion. Of these studies, the few that seem most relevant to the present research are studies in which American undergraduate men and women were asked to account for successful, real-world, academic behaviors. At least four such studies have appeared in which such students were asked to make attributions

for their performance on a course examination (Basow & Medcalf, 1988; Berg & Hyde, 1976; Erkut, 1983; Sweeney, Moreland & Gruber, 1982), and at least two studies have been published in which American undergraduate men and women were asked to account for their semester grades (DeBoer, 1983; Erkut, 1983).

Of these studies, two (both reported in Erkut, 1983) found that males were significantly more likely than females to attribute their academic outcomes to ability (or lack thereof), and the rest found no gender differences in attributions to ability for either successes or failures. Three studies (DeBoer, 1983; Erkut, 1983; Sweeney et al., 1982) reported that females were significantly more likely than males to attribute academic successes to effort, and two of these (DeBoer, 1983; Erkut, 1983) also found females more likely than males to attribute low grades to lack of effort. Only one of these six studies reported a significant gender difference for an external attribution. Sweeney and his colleagues (1982) found females significantly more likely than males to attribute their test performance to luck, but this main effect for gender was due primarily to attributions made for failures. When students performed successfully on a course test, there were no significant gender differences in their luck attributions. Taken together, these studies do not provide strong evidence for gender differences in the explanations undergraduates give for their academic achievements.

Perhaps it is noteworthy that both of the studies of attributions for semester grades yielded significant gender differences, but such differences appeared in only half of the studies of attributions for performance on a single test. Do these findings mean that consequential academic achievements requiring sustained effort over time will yield more gender differences in attributions than tasks requiring less time and effort? If the answer to

this question is yes, then it seems likely that males and females might differ significantly in their explanations for seeking a bachelor's degree even though gender differences in attributions are not strong or consistent for single course tests or for the many experimental tasks reviewed by Frieze, Whitley, Hanusa, and McHugh (1982) and by Sohn (1982). Given the literature reviewed above, however, it is less certain that such gender differences in attributions will be consistent with the subsequent tendency of men to attain higher levels of occupational achievement.

If, as expected, college men and women give different explanations for seeking their bachelor's degrees, what accounts for such differences? Attribution theory and research suggest that the explanations men and women provide for various behaviors depend on their performance level, expectations, and attainment values. The extent to which these three variables mediate between college students' gender and their explanations for seeking their bachelor degrees was tested in the research reported here.

Performance level refers to quality of performance. The most common measure of the quality of undergraduates' academic performance is their grade-point-average (GPA). Many studies (e.g., Anderson, 1981; Bank et al., 1990; Bean, 1985; Biddle et al. 1987; Cabrera et al. 1992b; Thomas, 1981) have appeared showing that grades have positive effects on persistence in higher education. These effects are significant even when students who flunk out are eliminated from the analyses and several other predictors of persistence are controlled. Although undergraduates are likely to be unfamiliar with the details of this research, the positive effect of GPA on degree completion is unlikely to have escaped their attention. In addition, it seems likely that they would view a bachelor's degree earned with high grades as a greater

success than one earned with minimum grades. Since attribution theory predicts that successful outcomes are more likely to produce internal attributions than less successful outcomes (Harvey & Weary, 1984; Ross & Fletcher, 1985), it seems likely that GPA will have a significant effect on the attributions undergraduates give for their bachelor's degree. If GPA were also found to vary by gender, then it is possible that gender differences in GPA might explain gender-based differences in attributions.

Another measure of academic quality is an undergraduate's rate of academic progress. Although some five-year baccalaureate-degree programs have appeared elsewhere in the United States, all undergraduate programs at the university that was the site of the research reported here were designed to be completed in a four-year period. As a result, students assumed that "normal" progress toward the baccalaureate degree consisted of four years from matriculation to graduation, and those who took more than four years were said to be progressing at a slower than normal pace. This favorable view of prompt achievement is also evident among employers (Thomas, 1981) and in the national movement toward greater accountability in higher education (Bryk & Hermanson, 1993). State governments and educational agencies often include rates of on-time degree completions among their indicators of institutional quality. Thus, it seems likely that a bachelor's degree earned quickly will be deemed a greater success than one that takes more than four years to complete. Since successful academic outcomes have been found to produce different attributions than less successful outcomes (Basow & Medcalf, 1988; DeBoer, 1983; Sweeney et al., 1982), it seems likely that rates of academic progress will affect attributions for completing the bachelor's degree. To date there seem to have been no tests of this possibility, but a national study of prompt and delayed

completion of the bachelor's degree (Thomas, 1981) found that females were significantly more likely than males to complete their bachelor's degrees within a four-year period.

Although attribution theorists have consistently argued that the quality of performance affects attributions, they have also recognized that performance quality does not necessarily correspond with expectations. This seems to be particularly true for undergraduate males. Several studies (e.g., Basow & Medcalf, 1988; Berg & Hyde, 1976; Erkut, 1983; Huber & Podsakoff, 1985) report that males expected to perform significantly better on achievement tasks than did females, but most of these studies found no significant gender differences in subsequent performance. Expectations have also been found to exert direct effects on subsequent attributions. Feather and Simon (1972), for example, found that among the Australian undergraduates they studied, unexpected outcomes on an examination were significantly more likely than expected outcomes to be attributed to good or bad luck. Similar findings have been reported by Gilmore and Minton (1974) for North American undergraduates. They found that subjects who approached an anagram task with a high level of confidence attributed failure externally and success internally, but these differences were reversed for subjects who were low in initial confidence. Findings such as these led Deaux (1976) to suggest that differences in expectations for performance might explain away some gender differences in attributions for performance. To date, surprisingly few tests of this hypothesis have appeared.

Nor have many tests appeared of the proposal by McHugh, Frieze, and Hanusa (1982) and by Wittig (1985) that gender differences in attainment values may produce gender differences in causal attributions. The term

attainment value is used to refer to the extent to which a particular task outcome is valued. According to Wittig (1985), males and females may value the same outcome differently because of the gender-relevance of the task itself or because the outcome serves a gender-related function. In the present context, Wittig's (1985) theory suggests the possibility that men and women might assign different values to their college degree or to its consequences, such as entry into a desired career. Unfortunately, neither McHugh and her colleagues (1982) nor Wittig (1985) specifies the kinds of attributions that are likely to result from high and low levels of attainment values. There is some suggestion in Wittig's work (1985, p. 7), however, that highly valued outcomes may produce more internal attributions than outcomes to which one gender or the other assigns a lower value.

In summary, the present research was designed to answer two questions. First, do men and women give different reasons, on average, for their decisions to seek the bachelor's degree? Second, can gender-related differences in reasons for seeking the bachelor's degree be explained by gender-related differences in performance levels (i.e., GPA and rates of academic progress), in degree-related expectations, or in the values assigned to degree completion and its consequences?

METHOD

Design and Sample

Data to answer these questions were obtained from a longitudinal study of a large sample of undergraduates at a major state university who were originally contacted in 1985. Among the participating students were 495 who enrolled in post-secondary education for the first time in summer or fall of 1985, remained at the university for at least one academic year, and completed

two questionnaires, one early in the fall semester of 1985 and a second during the spring semester of 1986. In addition, all of these students signed a permission form granting the researchers the right to examine their university records. These records were used in 1989 when an effort was made to re-contact these students, both those who had remained at the major state university and those who had left.

Of the original 495, 71 could not be located. Of the 424 students who could be located and were sent questionnaires in 1989, sixty-one percent (N = 257) returned them. Both this group of students and the larger sample from which they came were predominately young, white, middle class, and female. In both groups, more than 85% were 18 years of age when the study started; over 90% described themselves as white or Caucasian; fewer than 5% were Jewish or Hispanic; and more than 60% came from families whose annual income was above the national median. Sixty-five per cent (N = 322) of the original 495 were women, and this figure rose to 69% (N = 177) among those who could be located and who returned their questionnaires.

Measures of Explanations

Measures of students' explanations for seeking their bachelor's degree consisted of a page of scales contained in the questionnaires sent to students in 1989. Prior to sending the questionnaires, university records were used to determine which students were still enrolled or had graduated from the university at which they began their undergraduate work. Those who had left the university prior to graduation were telephoned to determine whether they had transferred to another college (and had graduated or were still seeking a bachelor's degree) or had dropped out of higher education. Very few respondents (24 of those contacted; 15 of those returning questionnaires) were

willing to say that they had dropped out and might never gain a bachelor's degree. Most had already enrolled in other institutions of higher education, and all of the others said they definitely expected to return to college or university at some time in the future.

As a result of this information, most respondents were sent questionnaires containing a page that asked them to rate the importance of various reasons for "your decision to seek a bachelor's degree," and only 15 of the returned questionnaires asked students to rate reasons that "prevented you from earning a bachelor's degree." Because of their small number, these latter questionnaires were eliminated from the present analysis, along with one returned questionnaire in which the respondent failed to answer most of the questions about her reasons for seeking a degree. These eliminations reduced the sample to 241, including 72 males and 169 females, and all analyses reported below are based on this number.

Table I shows the twenty-one reasons for seeking the bachelor's degree that respondents were asked to evaluate. The scales students used to rate these explanations ranged from a low of 1 for very unimportant to a high of 5 for very important. Answers to the 21 items were factor analyzed using a principal components analysis followed by rotation using a varimax criterion (Wilkinson, 1990). These procedures yielded four factors with eigenvalues greater than 1.00. The four rotated factors are presented in Table I which shows that seven items have loadings on Factor 1 of .556 or more. Because of their wording, these seven items were combined into a scale called Internal Reasons. For the 241 respondents, this scale had a range from 1.429 to 5.0, a mean score of 4.455, and an internal consistency of $\alpha = .817$.

Table I About Here

Table I also shows that five items had loadings on Factor 2 that were greater than .502. These items all seem to measure actions of people other than the respondent, and they were combined into a scale called Social Influences (α = .772). The range of scores obtained by respondents on this scale was from 1.0 to 5.0, and the average score was 3.266, indicating that respondents considered social influences to be considerably less important than internal reasons as explanations for seeking their bachelor's degree.

Table I reveals that the five highest loadings on Factor 3, ranging from .642 to .759, are all the items concerned with the consequences of earning a bachelor's degree. Although these consequences seem diverse, including life style, money, prestige, jobs, and career, they produced a scale with a high level of internal consistency, α = .802. People who stress the consequences of a particular activity are usually said to take an instrumental approach toward that activity. For this reason, the set of items with high loadings on Factor 3 was labelled the Instrumental Reasons Scale. The range of scores obtained by respondents on this scale was from 1.2 to 5.0 with an average of 4.339, a figure that is only slightly below that for internal reasons but considerably higher than that on the Social Influences Scale.

Only three items produced high loadings (.654 to .844) on the fourth factor. One of these measured luck, and the others measured lack of planning. The name Academic Drift was given to this scale, although it also seems to reflect a considerable amount of fatalism. Considering that the scale has only three items, it exhibited a strong internal consistency of α = .730.

Scores on the Academic Drift Scale ranged from 1.0 to 4.0 with an average of 1.678, indicating that most respondents considered drift to be an unimportant reason for seeking their bachelor's degree

Finally, Table I reveals one item that was not highly associated with any of the four factors. This item asked respondents to indicate the importance of "your academic record" in their decision to seek a bachelor's degree. This single item, called the Academic Record Scale in subsequent analyses, had a range from 1.0 to 5.0 and an average score across all respondents of 3.892.

Measures of Mediating Variables

GPA was obtained from university records and consisted of each student's cumulative grade-point average, based on a scale in which grades of A (excellent)=4.0 and failing grades=0.0. The actual grade-point average of the 241 students ranged from 0.71 to 4.00 with an average of 2.93.

Academic Progress was assessed using a combination of university records and responses to questions on the 1989 questionnaires. A few respondents (N = 17) had completed bachelor's degrees in less than four years; 46% (N = 111) completed their degrees in four years; and the rest (N = 113) anticipated completion dates ranging from slightly over four years into an indefinite future time. In the statistical analyses reported here, the first two groups were combined into a group called "prompt graduates," and the rest were called "delayed graduates."

Expectations were measured by four questions from the Fall, 1985, questionnaire. Early in the questionnaire, students were asked to indicate on a four-point scale the extent to which they were oriented to finishing college without interruptions. Later in the questionnaire, they were asked to indicate, on five-point scales, their preference, personal norm, and intention

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for completing college without interruptions. Respondents who expressed the strongest possible determination to complete the degree by giving maximum endorsement to all four modes of expectations were given a high score on the Expectations Scale. Those who were less confident about finishing college without interruptions were given a low score on the Expectations Scale. The fact that 159 respondents obtained high scores on the Expectations Scale and only 82 got low scores means that almost two-thirds of the students were maximally confident when they entered the university that they would complete their degrees promptly.

Attainment values were assessed in two different ways. First a Degree Importance Scale was constructed out of the answers respondents gave to two items on the 1989 questionnaires. One of these items asked respondents to indicate how strongly they agreed or disagreed that "All things considered, graduating from college is a very important accomplishment." The second item appeared later in the questionnaire and was worded in a more self-relevant manner: "All things considered, do you think your decision to seek a bachelor's degree is good or bad?" Those who answered the second question with "a very good decision" and strongly agreed with the first item were given a high score on the Degree Importance Scale. Those who gave weaker endorsement to one or both of these items were given a low score on the Degree Importance Scale. Nor surprisingly, since all of the respondents had earned or intended to obtain degrees, 182 received a high score on this scale with only 59 assigning less importance to the bachelor's degree.

The second measure of attainment values assessed the extent to which respondents valued careers, a major consequence of degree completion. Specifically, respondents were asked to indicate on the 1989 questionnaire how

career oriented they considered themselves to be. Those who considered a career orientation to be "very characteristic of me" (N = 115) were given a high score on the scale called Career Importance. Those who couldn't decide how career oriented they were (N = 1) and those who considered a career orientation to be uncharacteristic of them (N = 24) or only somewhat characteristic (N = 101) were given a low score on the Career Importance Scale.

RESULTS

Did male and female respondents give different explanations for seeking a bachelor's degree? Data to answer this question are found in Table II which shows the average scores obtained by males and females on the five scales used to measure explanations. Looking across the rows, it can be seen that females scored significantly higher than males on the Internal Reasons Scale and significantly lower than males on the Academic Drift Scale. Not shown in the table is the fact that, for both of these scales, the gender differences on each scale item were the same as those for the average scale scores. In other words, males scored higher than females on the item measuring luck attributions as well as on the other two items on the Academic Drift Scale (see Table I for item wordings). Similarly, females achieved higher scores than males on all seven items on the Internal Reasons Scale, the item measuring ability attributions as well as those measuring effort attributions and explanations based on personal fulfillment (see Table I).

Table II About Here

Females also scored consistently higher than males did on all five items constituting the Instrumentality Scale. Despite this consistency, gender

differences in the average scores on this scale, were too small to achieve an acceptable level of statistical significance (difference = .167; p = .12). No consistent pattern of differences was found for the items on the Social Influences Scale, but all gender differences across items were tiny and non-significant, as was the gender difference on the Academic Record Scale shown in Table II.

The two significant gender differences that are shown in Table II are relatively small when compared to the differences in importance ratings across explanations. Looking down the columns of means in Table II, it can be seen that both males and females considered internal and instrumental reasons to be significantly more important than their academic record as explanations for seeking the bachelor's degree. Academic record, in turn, was said to be significantly more important than social influences by both males and females, and both groups considered academic drift to be significantly less important than all the other reasons they were asked to rate. The only gender difference that emerges from this ranking of their average scores on the five measures of explanations is the finding that females rated internal reasons significantly higher than instrumental reasons whereas males gave these two kinds of reasons approximately equal ratings.

Can the greater importance undergraduate women, compared to men, assigned to internal reasons and the lesser importance they gave to academic drift be explained by gender differences in performance levels, degree-related expectations, and attainment values? Positive answers to this question are highly unlikely unless two conditions are met. First, the measures of performance levels, expectations, and attainment values (i.e., the mediating variables) should be significantly related to gender. Second, these mediating variables

should be significantly related to the Internal Reasons Scale and the Academic Drift Scale, the only two measures of explanations on which males and females obtained significantly different scores.

Results of tests to determine whether these two conditions were met are presented in Table III which shows the Pearson product-moment correlations between gender, the five mediating variables, and the five scales that measure explanations for seeking the bachelor's degree. The first column of coefficients in the table reveal that only two mediating variables were significantly correlated with gender. Females were found to have significantly higher grades and significantly faster progress than males. In contrast, only small, non-significant associations with gender were found for expectations and the two measures of attainment values. Interestingly, however, these latter three mediating variables were all significantly correlated with the Internal Reasons and Academic Drift Scales as well as with some of the other measures of explanations for seeking the bachelor's degree.

Table III About Here

In contrast, the two measures of performance level, although significantly associated with gender, had correlations with the Internal Reasons Scale that were too small to achieve the .05 level of statistical significance. Academic progress was significantly correlated with Academic Drift ($r = -.130$; $p = .04$), however, and the correlation between GPA and Academic Drift was almost the same size ($r = -.126$; $p = .052$). These latter findings raise the possibility that the two measures of performance level might explain the relationship between gender and academic drift, but the possibility is not a

strong one because gender is more strongly associated with the Academic Drift Scale ($r = -.193$; $p = .003$) than is either GPA or academic progress.

Nevertheless, this possibility was assessed by means of a regression analysis in which the independent effects of gender and the five mediating variables on Academic Drift were assessed. A similar regression analysis was done assessing the effects of these six variables on Internal Reasons. The results of these analyses are presented in Table IV, and they confirm the conclusion that the mediating variables did not explain the effects of gender on either the Internal Reasons or the Academic Drift Scales. With all five mediating variables controlled, women continued to rate internal reasons for seeking their degrees as significantly more important ($\beta = .148$; $p = .009$) and academic drift as significantly less important ($\beta = -.151$; $p = .014$) than did their male counterparts.

Table IV About Here

DISCUSSION

The results of this study provide no evidence that women give self-defeating explanations for their decisions to seek the bachelor's degree. This finding replicates the lack of support for the Externality and Self-Derogation models that resulted from the meta-analyses of 22 studies of causal attributions reported by Frieze and her colleagues (1982). In contrast to those two models, women were found to be no more likely than men to attribute their successes to external factors. Indeed, the present study suggests the opposite, namely, that women may be more likely than men to take personal (internal) credit for their long-term, real world accomplishments. This

suggestion gains additional support from a recent study of senior public administrators by Russo, Kelly, and Deacon (1991) who found that female administrators rated ability and hard work significantly more important in accounting for their own successes than males did.

In contrast to the present study, however, Russo and her colleagues (1991) found no significant difference between male and female administrators in the importance they assigned to luck when accounting for their own successes. As noted above, studies of American undergraduates' attributions for successful performance on course tests (Basow & Medcalf, 1988; Berg & Hyde, 1976; Erkut, 1983; Sweeney et al., 1982) and for semester GPAs (DeBoer, 1983; Erkut, 1983) have also found no gender differences in luck attributions for successes. When gender differences in luck attributions have appeared in these or other studies, they have usually been for failures rather than successes (Sohn, 1982; Sweeney et al., 1982), and it has been women, rather than men, who have been more likely to attribute their outcomes to luck (Frieze et al., 1982; Sohn, 1982).

One possible reason for the differences between the luck findings in the present study and previous ones may be the wording of the luck measure in the present study which linked "luck" to "unplanned." This linkage may also explain why luck had such a strong loading on the Academic Drift factor (see Table I). It is worth noting, however, that the Academic Drift Scale and the luck measure which was part of it were found to be negatively associated with measures of performance quality and expectations (see Table III). These same kinds of negative associations with performance quality and expectations have been widely reported for more conventional measures of luck (see, e.g., DeBoer, 1983; Feather & Simon, 1972; Simon & Feather, 1973; Sweeney et al.,

1982). Perhaps the unusual finding that women give less emphasis to luck than men do results less from the measures used in the present study than from its focus on seeking the bachelor's degree rather than on other tasks and outcomes. Whatever the explanation, it is clear that the undergraduate women in this study were even less likely than their male counterparts to explain their decision to seek the bachelor's degree on the basis of luck, accidents, drift, or lack of planning.

Not only did the women in this study reject self-defeating explanations, but they also had higher performance levels, as measured by GPA and Academic Progress, than did the men. Surprisingly, these higher performance levels failed to explain why women made stronger internal attributions and weaker attributions to academic drift than men did. Perhaps the reason lies in the fact that all of the students in this study planned to complete their bachelor's degrees. Low grades and slow progress may not yet have been seen by them as portents of failure even though research has shown that GPA and rates of academic progress are significant predictors of whether a person will ever graduate from college (Thomas, 1981).

Expectations have also been found to predict persistence in higher education (Bank, Biddle, & Slavings, 1992; Biddle et al., 1987; Tinto, 1987). Thus, it was not surprising to find that undergraduates who entered the university with expectations for prompt completion of their degree were more likely to have completed their degree in four years time than those who entered with lower expectations. Given the findings in previous studies (reviewed by Deaux, 1976) of positive associations between expected outcomes and internal attributions and of negative associations between expected outcomes and luck, the significant correlations between expectations and

scores on both the Internal Reasons and Academic Drift Scales also came as no surprise (see Table III). What was surprising, given the extensive literature suggesting that men have higher self-expectations than women (Basow & Medcalf, 1988; Berg & Hyde, 1976; Deaux, 1976; Erkut, 1983; Huber & Podsakoff, 1985), was the finding in the present study of a nonsignificant association between gender and self-expectations. Perhaps this finding reflects an historic shift upward not only in the academic participation and success of women, mentioned at the beginning of this paper, but also in women's perceptions of their academic potential. These new perceptions may be part of an ideology that is shifting from an emphasis on women as self-sacrificing caregivers (Gilligan, 1982) to a greater emphasis on them as self-directed achievers.

This ideological shift may also explain why no significant differences were found in the attainment values of the women and men who participated in this study. These women prized the bachelor's degree as much as the men did, and they were just as career oriented as their male counterparts. As a result, attainment values could not explain gender differences in attributions, but both the Degree Importance Scale and the Career Importance Scale were found to be significantly associated with undergraduates' explanations for seeking their college degrees (see Tables III and IV). Thus, the data support claims by Frieze and her colleagues (1982) and Wittig (1985) that attainment values have significant effects on attributions, but these effects may be independent of gender even when the values concern such goals as educational attainment and careers that used to be so highly gender-related.

For those who are interested in developing theories about relationships between gender and attributions, the findings reported here offer more challenges than answers. Contrary to much theorizing in the literature, the

women and men in this study did not make attributions for their behaviors that would predict lower levels of subsequent achievement for the women. Perhaps this finding results from the study's focus on attainment of the bachelor's degree, a task at which contemporary American women out-achieve American men (National Center for Educational Statistics, 1993; Thomas, 1981). This possibility is weakened somewhat by the finding that undergraduate women entered college with the same expectations as men, but it is possible that these expectations became more gender-related over the four years of this study as women earned higher grades and progressed more quickly than men toward their degrees. This latter possibility cannot be tested with the present data, but it does suggest the need for research that looks at changes in expectations, performance levels, and attributions over time.

Efforts should also be made to identify mediating variables other than performance level, expectations, and attainment values that might explain gender-related differences in attributions for college graduation and for other consequential achievements. One such variable suggested by the findings reported here is gender ideology which seems to be changing from traditionalism to egalitarianism, including greater individualism for women. As noted above, such changes may explain both the gender differences in self-attributions found in this study and the gender similarities found for expectations and attainment values. For those who are committed to attribution theory and have been concerned about the relative achievement levels of women and men, these findings should be a source of optimism about the future.

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Table I. Rotated Factor Loadings for Explanations for Seeking Bachelor's Degree

Explanations	Factor I	Factor II	Factor III	Factor IV
Your self-discipline and maturity (9)	.740	-.039	.083	.011
Your own skills and abilities (1)	.701	.033	.182	-.114
Your desire for self-fulfillment (5)	.689	.017	.085	-.220
Your enjoyment of the process of earning your college degree (7)	.684	.155	-.015	-.095
Your own effort and hard work (21)	.672	-.110	.310	-.066
Your determination to finish what you started (13)	.567	.260	.250	-.107
Your personal preferences and desires for a college degree (17)	.556	-.108	.522	-.106
Other peoples' expectations of you (10)	.063	.808	.098	.006
Pressure from other people (6)	-.034	.784	-.005	.269
Your obligations to other people (15)	-.074	.725	.063	.209
Support and encouragement from your family (12)	.185	.571	.397	-.034
The support and encouragement of friends (3)	.143	.502	.420	.026
The life style that results from getting a college degree (11)	.134	.145	.759	-.003
The financial worth of a college degree (4)	.080	.237	.756	-.024
The prestige of a college degree (16)	.257	.234	.704	.034
The kinds of jobs that require college degrees (2)	.042	.082	.687	-.040
Your career plans (20)	.360	-.164	.642	-.124
Couldn't arrange anything better to do (19)	-.066	-.037	-.006	.844
Drifting along, easier to finish than not (8)	-.102	.258	.012	.776
Luck, accidental, unplanned (14)	-.279	.265	-.107	.654
Your academic record (18)	.429	.013	.401	.124
Percent of Total Variance Explained	17.226	13.293	16.687	9.486

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Table II. Average Importance Ratings Given By Males and Females To Explanations for Seeking Their Bachelor's Degree

Type of Explanation	Mean Ratings Given By.... Males	Females	Differences
Internal Reasons	4.292[a]	4.525[a]	-.233**
Instrumental Reasons	4.222[a]	4.389[b]	-.167
Academic Record	3.875[b]	3.899[c]	-.024
Social Influences	3.247[c]	3.274[d]	-.027
Academic Drift	1.894[d]	1.586[e]	.308**

All scales range from 1.0=very unimportant to 5.0=very important.

For differences between males and females, **p(two-tailed)<.01 for results of two-sample t-tests.

Within each column, means identified by different letters are significantly different from one another at p(two-tailed)≤.01 according to t-tests for paired samples.

Table III. Pearson Product-Moment Correlations Between Gender, Mediating Variables, and Explanations for the Bachelor's Degree

	Gender (M=1;F=2)	M1	M2	M3	M4	M5
Mediating Variables						
M1. GPA	.173*					
M2. Academic Progress	.132*	.517*				
M3. Expectations	.067	.033	.150*			
M4. Degree Importance	.050	-.037	.026	.100		
M5. Career Importance	.025	.032	.049	.125	.235*	
Explanations						
E1. Internal Reasons	.194*	.094	.123	.213*	.439*	.305*
E2. Instrumental Reasons	.109	-.037	.054	.185*	.354*	.307*
E3. Academic Record	.010	.319*	.307*	.096	.206*	.123
E4. Social Influences	.015	-.098	-.049	.058	.038	-.050
E5. Academic Drift	-.193*	-.126	-.130*	-.129*	-.321*	-.196*

*$p < .05$; $N = 241$.

Table IV. Effects of Gender and Mediating Variables on Scales Measuring Internal Reasons and Academic Drift

Independent Variables	Standardized Beta Coefficients: Internal Reasons Scale	Standardized Beta Coefficients: Academic Drift Scale
Gender (Female=2; Male=1)	.148*	-.151*
GPA	.052	-.080
Academic Progress	.037	-.046
Expectations	.134*	-.067
Degree Importance	.374*	-.282*
Career Importance	.194	-.113
Adjusted Multiple R^2	.290*	.167*

*p<.05; N = 241.